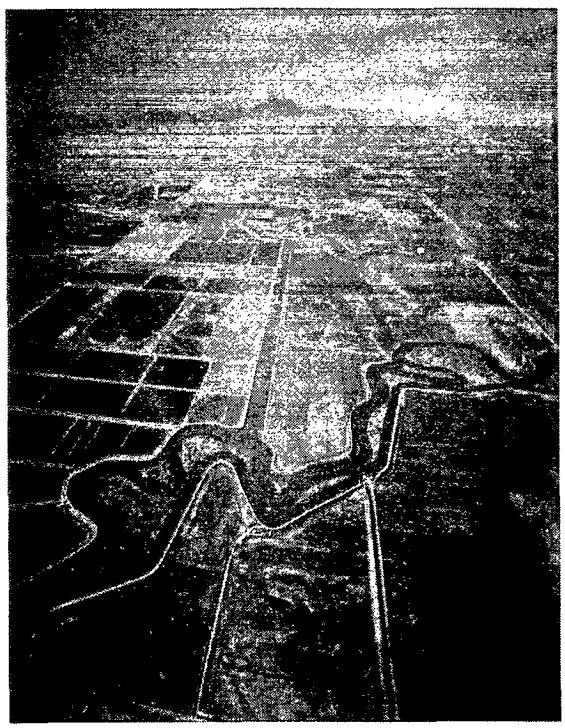

CALFED
BAY-DELTA
PROGRAM

February 1998 Briefing Packet

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CALFED BAY-DELTA PROGRAM

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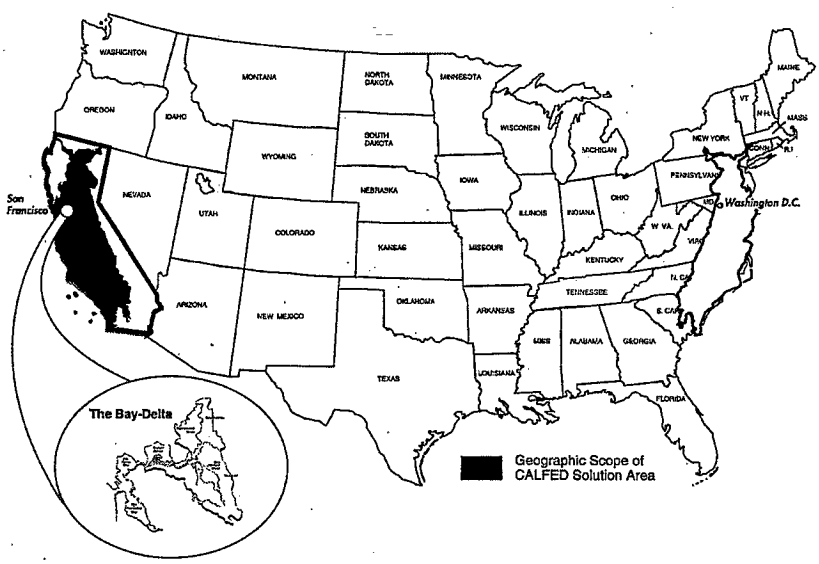
Program Overview

The CALFED Bay-Delta Program was initiated in 1995 by Governor Pete Wilson and the Clinton Administration to address environmental and water management problems associated with the Bay-Delta system, an intricate web of waterways created at the junction of the San Francisco Bay and the Sacramento and San Joaquin rivers and the watershed that feeds them. Today the Bay-Delta system is in serious trouble. Habitats are declining, and some native species are listed as endangered. The system has suffered from impaired water quality, and water supply reliability has declined significantly. Many levees are structurally weak and present a high risk of failure.

The Bay-Delta system is a critically important part of California's natural environment and economy. It supplies drinking water for more than 22 million Californians and irrigation water for the state's $24 billion agricultural industry. It also supports 750 plant and animal species; some found nowhere else on the planet. Ultimately, California's trillion-dollar economy, the seventh largest in the world, is at risk if Bay-Delta system environmental and water management problems are not resolved.

A New Approach

CALFED represents a new approach to natural resource management. It combines state and federal agencies with regulatory power over the system and California's leading urban, business, environmental and agricultural interests, all of whom are working together to develop a comprehensive consensus solution to the problems of the Bay-Delta. Public input is a key component of the process. Technical working groups, public meetings and workshops and the federally chartered Bay-Delta Advisory Council all provide opportunities for Californians to participate in the decision-making process.



The scope of the CALFED Bay-Delta Program, if laid over the east coast, would cover eight states.

Environmental Review

The CALFED Bay-Delta Program is divided into three phases. Phase I, completed in September 1996, concentrated on identifying and defining the problems confronting the Bay-Delta system. Also during Phase I a mission statement and guiding principles were developed along with Program objectives and an array of potential actions to meet them.

During Phase II, currently underway, the Program is conducting a comprehensive programmatic environmental review process. Because the CALFED solution area is so large, and because it is approaching its task in an integrated, comprehensive way, environmental review must be conducted on a very broad level. Site-specific, detailed environmental review will occur during Phase III, prior to the implementation of each proposed action. Implementation of the CALFED Bay-Delta solution is expected to take 25 to 30 years.

What's In the Draft PEIS/PEIR?

To comply with the National Environmental Policy Act (EIS) and the California Environmental Quality Act (EIR), CALFED is preparing a Programmatic Environmental Impact Statement/Programmatic Environmental Impact Report. The main document and executive summary contain the following information:

- Definition of Program scope.
- Potential impacts of solution alternatives, each containing program elements for ecosystem restoration, water quality, water supply reliability and levee system integrity, Delta conveyance and a range of storage options.
- Potential impacts of the no-action alternative.
- Steps that have been and will continue to be taken to identify a preferred alternative.
- Current regulatory climate and potential land-use changes.
- Public involvement opportunities.

No Preferred Alternative

The CALFED Draft PEIS/PEIR does not identify a preferred alternative. All three alternatives were evaluated by technical staff and public working committees against such criteria as benefits to water quality, impact on fish and wildlife, total cost and operational flexibility. This technical information is then considered in the context of assurances, financing and overall ability to implement.

Choosing the best solution to the problems of the Bay-Delta system is not purely a technical decision. All three alternatives remaining have both strengths and weaknesses. It is up to the

public to decide what issues are most important to California's future. Through meetings of the Bay-Delta Advisory Council, presentations to interested groups, public hearings and workshops and other outreach, CALFED is looking for input on these alternatives.

The final PEIS/PEIR, which is expected to be released in fall 1998, will identify a preferred alternative, based on both the technical analysis and public input.

Phase II Interim Report

The Phase II Interim Report is an important disclosure document. It describes the CALFED process, solution alternatives and the fundamental Program concepts, and analyses that have revealed the comparative technical advantages of each alternative. It also describes how the CALFED agencies will use analysis results in a public process to proceed to the selection of a preferred Program alternative by December 1998.

Appendices

Ten other appendices, in addition to the Phase II Interim Report, expand upon the information contained in the main document.

- *Program Goals and Objectives* – Summary of Program goals and objectives developed in Phase I of the Program.
- *No Action Alternative* – Describes the No Action Alternative, which is an estimate of future (year 2020) conditions if the Program alternatives are not implemented.
- *Program Alternatives* – Summarizes the 12 alternative configurations built around three Program alternatives.
- *Ecosystem Restoration Program Plan* – Basis of the ecosystem restoration actions included in all potential solutions.
- *Water Quality Program* – Basis of water quality actions included in all potential solutions.
- *Water Use Efficiency Program and Water Transfers* – Basis of water use efficiency actions included in all alternatives.
- *Long-Term Levee Protection Plan* – Basis of Delta levee improvements included in all potential solutions.

Appendices (cont.)

- *Watershed Management Coordination* – Basis of watershed management coordination actions included in all potential solutions.
- *Summary of Modeling Assumptions and Results* – Summarizes and references the many modeling reports developed during evaluations for the Programmatic EIS/EIR.
- *Implementation Strategy* – Includes financial and assurance strategies for guiding implementation of the long-term comprehensive plan.

Technical Reports

Technical supporting documents that have been provided previously to CALFED agencies are also available to interested parties. These include:

Agricultural Resources - Made up of the Land Use and part of the Regional Economics technical reports that were issued in May, July and September of 1997

Cultural Resources - Descriptive reports issued May, July and September 1997

Fisheries & Aquatic Resources - Descriptive reports issued May, July and September 1997

Flood Control Systems - Descriptive reports issued May, July and September 1997

Geomorphology & Soils - Descriptive reports issued May, July and September 1997

Groundwater Resources - Descriptive reports issued May, July and September 1997

Power Production & Energy - Descriptive reports issued May, July and September 1997

Recreational Resources - Descriptive reports issued May, July and September 1997. Also includes the Fish, Wildlife & Recreation technical report

Regional Economics - Descriptive reports issued May, July and September 1997

Surface Water Resources - Descriptive reports issued May, July and September 1997

Urban Resources - Made up of the Land Use technical report issued in May, July and September 1997

Vegetation & Wildlife - Descriptive reports issued May, July and September 1997

Water Quality - Descriptive reports issued May, July and September 1997

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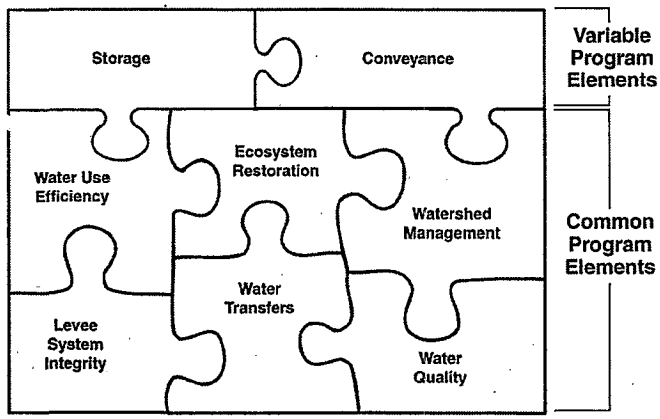
Program Alternatives



The alternatives for a Bay-Delta solution are made up of building blocks referred to as Program elements. Some elements are common to all alternatives and some elements vary from alternative to alternative. Common Programs include levee system integrity elements, water quality, ecosystem restoration and water use efficiency. During Phase II of the Program, it was recognized that two additional Common Program elements were needed to achieve CALFED's objectives. These are watershed management and water transfers. Variable elements include storage and conveyance (the way water is moved through the Bay-Delta system).

Common Program Elements

The six Common Programs form the foundation for overall improvement of the Bay-Delta system. Each one represents a significant investment in the system and will significantly reduce the system's resource conflicts.

Long-Term Levee Protection Plan

Provides significant improvements in the reliability of the Delta levees to benefit all users of Delta water and land.

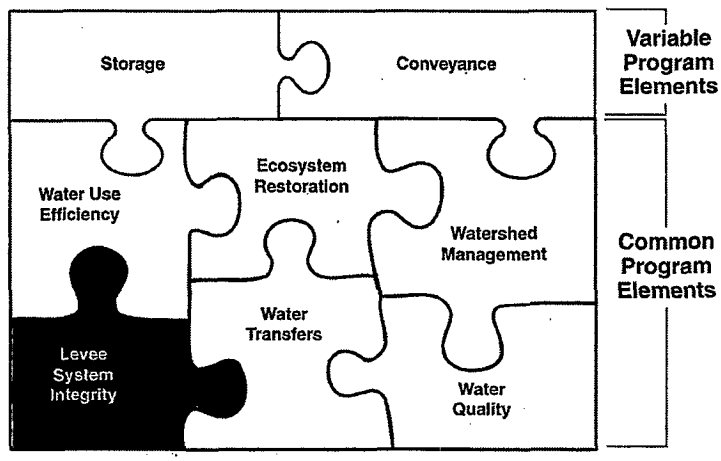
Delta levees are the most visible man-made feature of the Bay-Delta system. They are an integral part of the Delta landscape and are key to preserving the Delta's physical characteristics and processes, including definition of the Delta waterways and islands. There are five main parts to the levee protection plan:

Base-Level Protection Plan – Provides equitably distributed funding to participating local agencies in the Delta.

Special Improvement Projects – Establishes a funding mechanism for special habitat improvement and levee stabilization projects to augment the base level funding. Special

improvement project funding is based on the benefit to the public, not the need for improvement.

Delta Island Subsidence Control Plan – Focuses on reducing the risk to levee stability from subsidence by funding grant projects to develop best management practices.



Emergency Management Plan – Builds upon existing state, federal and local agency emergency management programs to improve protection of Delta resources in the event of a disaster.

Seismic Risk Assessment – Evaluates the potential performance of the existing levee system during seismic events.

Key Benefits

- Provides funding for continued maintenance of levees to protect Delta functions
- Ensures suitable funding, equipment and materials availability, and coordination to rapidly respond to levee failures
- Subsidence reduction helps long-term Delta system integrity
- Increases reliability for water supply needs from the Delta and in-Delta water quality
- Increases reliability for in-Delta land use
- Increases reliability for in-Delta aquatic and wildlife habitat

Issues & Concerns

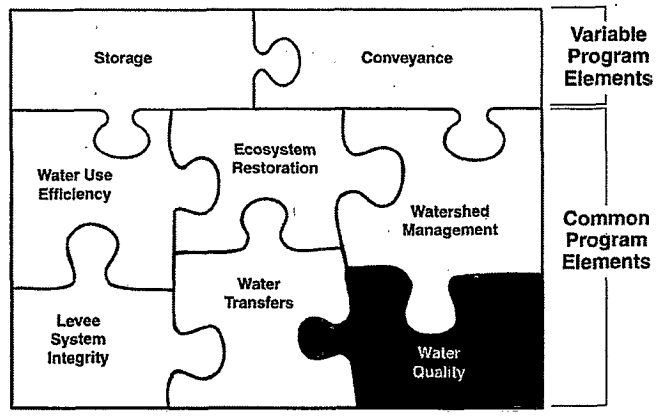
- Cost of implementation may exceed the benefits
- Specific management entity may be needed to assure integration with other program elements
- Substantial conversion of productive agricultural land will occur
- Support of the levee restoration program would diminish if an isolated facility were built
- Levee system integrity cannot be sustained if subsidence problems continue
- Dredging for the levee program may affect water quality and sensitive fish and wildlife

Water Quality Program

Makes significant reductions in point and non-point source pollution for the benefit of all water uses and the Bay-Delta ecosystem.

The Water Quality Program element includes the following broad categories of programmatic actions:

- Mine Drainage
- Urban and Industrial Runoff
- Wastewater and Industrial Discharge
- Agricultural Drainage and Runoff
- Water Treatment
- Water Management
- Human Health
- Toxicity of Unknown Origin



While the Water Quality Program remains relatively unchanged among the alternatives, its performance can vary significantly depending on the other Program elements. Storage can help timing for the release of pollutants remaining after source control efforts. Improved conveyance south to Delta export pumps will improve water quality for those diversions but may decrease water quality for in-Delta diversions.

Key Benefits

- Improves Delta water quality by reducing volume of urban and agricultural runoff/drainage and concentration of pollutants entering the Delta
- Improves water quality for the ecosystem by reducing toxicants as a limiting factor
- Improves drinking water quality and public health benefits
- Reduces concentration of compounds contributing to trihalomethane formation potential and degradation of drinking water supplies

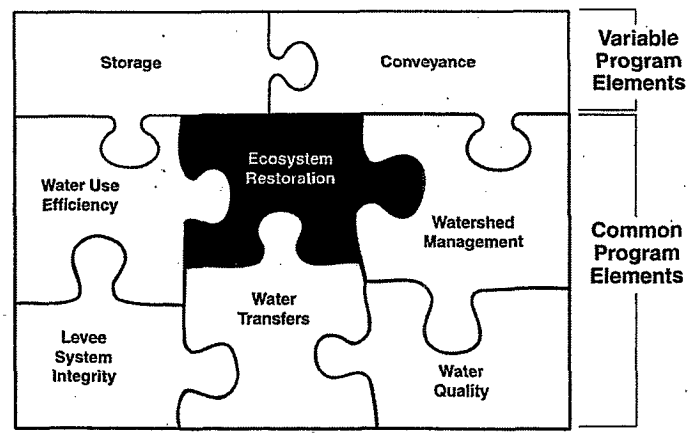
Issues & Concerns

- Differing opinions on approach: regulatory framework v. incentive-based
- Need better integration with ecosystem restoration and water use efficiency
- Program not sufficiently aggressive or developed to accomplish more than status quo
- Differing views on how to achieve drinking water quality objectives – providing the highest quality source water versus relying upon treatment methods
- Disagreement over whether the program should include dilution-oriented actions

Ecosystem Restoration Program

Provides significant improvements in habitat for the environment, restoration of some critical flows and reduced conflict with other Delta system resources.

This Common Program contains the following types of actions:



- Restore, protect and manage important habitat types
- Restore critical instream flows and Delta outflow in key springtime periods
- Develop floodways along the lower Cosumnes and San Joaquin rivers
- Construct setback levees to increase floodplain interactions and provide seasonal aquatic and riparian habitats
- Develop prevention and control programs for invasive species
- Protect sediment sources that feed streams and rivers in the Bay-Delta system
- Support local watershed planning and management programs
- Install state-of-the-art fish screens
- Implement or expand fish marking programs at hatcheries and fish production facilities in the Bay-Delta system
- Modify barriers that temporarily impair fish passage
- Evaluate and reduce adverse effects on contaminants
- Implement a strong ecosystem monitoring program to evaluate short- and long- term trends in ecosystem health
- Implement a well-funded research program to provide information needed for future solutions and decisions

Key Benefits

- Reverses decline in ecosystem health
- Supports a healthy Bay-Delta ecosystem
- Supports sustainable production and survival of plant and wildlife species
- Reduces the conflict between fisheries and water supply opportunities

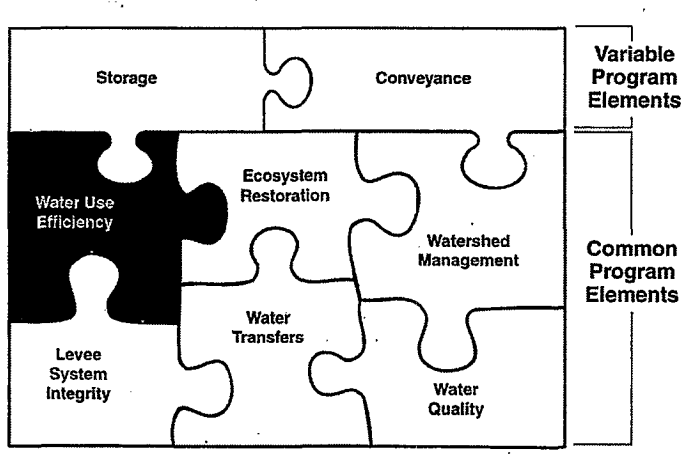
Issues & Concerns

- Must integrate resource priorities, scientific oversight, and collaborative decision making involving local entities
- Adaptive management creates assurance issues that may be best addressed by new institutional structures
- Habitat restoration actions require significant agricultural land conversion
- Differing views on the success of restoring habitat in leading to recovery of fish populations without reducing diversion effects and the restoration of natural flow patterns
- Differing views over inclusion of restoration actions in the San Francisco Bay area
- Importance of toxics as an ecosystem stressor must be better understood
- Need understanding and validation of conceptual ecosystem models
- Concern about water needed to meet ecosystem restoration flow objectives

Water Use Efficiency Program

Provides policies for efficient use of water in agricultural and urban settings and environmental purposes, which is essential to using existing water supplies wisely and assuring efficient use of any new supplies developed through the Program.

The CALFED Water Use Efficiency Program builds upon the fact that implementation of efficiency measures occurs mostly at the local and regional levels.



Conservation related actions include:

- Work with California Urban Conservation Council and the Agricultural Water Management Council to identify appropriate conservation measures
- Expand state and federal programs to provide sharply increased levels of planning, technical and financial assistance and develop new ways of providing assistance in the most effective manner
- Help urban water suppliers comply with the Urban Water Management Planning Act
- Help water suppliers and water users identify and implement water management measures that can yield multiple benefits
- Identify and implement practices to improve water management of wildlife refuges

Water recycling actions include:

- Help urban water agencies comply with the water recycling provisions in the urban Water Management Planning Act
- Expand state and federal recycling programs in order to provide sharply increased levels of planning, technical and financial assistance, and develop new ways of providing assistance in the most effective manner
- Provide regional planning assistance that can increase opportunities for use of recycled water

Key Benefits

- Reduces demand for Delta exports and reduces related entrainment effects on fisheries
- Can help in timing of diversions for reduced entrainment effects on fisheries
- Could make water available for transfers and for environmental flows
- May improve overall Delta and tributary water quality
- Could reduce the total salt load in the San Joaquin Valley

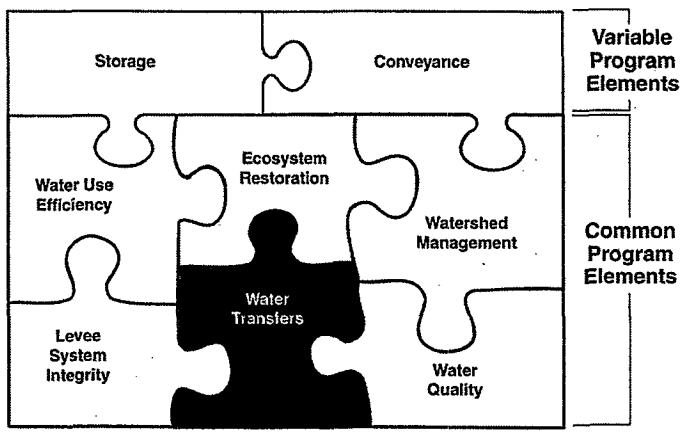
Issues & Concerns

- Program does not include direct demand management actions
- Conservation implementation must include cost-effective measures from a statewide perspective
- Concern that the current program approach emphasizes incentives and markets more than a regulatory framework
- Processes to demonstrate efficient use need refinement, stakeholder consensus and continuing financial assistance
- Agricultural Water Management Council does not provide adequate assurance of efficient use
- Measurement of water deliveries and volumetric pricing are being considered as conditions of receiving new or transferred water
- Need strong support for programs to provide assistance with planning, financing, and implementation of local water use efficiency measures
- Concern about analysis that shows greater potential for urban water conservation than agricultural water conservation

Water Transfers

Provides a policy framework to facilitate and encourage a properly regulated water market to move water between users, including environmental uses, on a voluntary and compensated basis.

Water transfers are one way to increase water supply reliability. The CALFED approach to water transfers is to encourage the development of standard guidelines based on those presented in Governor Pete Wilson's 1992 water policy address.



- Water transfers must be voluntary. Water rights of sellers must not be impaired.
- Water transfers must not harm fish and wildlife or their habitats.
- There needs to be assurances that water transfers will not cause overdraft or degradation of groundwater basins.
- Entities receiving transferred water should be required to show they are already making efficient use of existing water supplies.
- Water Districts and agencies that hold water rights or contracts to transferred water must have a strong role in determining what is done. The impact on the fiscal integrity of the districts and on the economy of small agricultural communities cannot be ignored.

Key Benefits

- Improves the economic efficiency of water use
- Provides an incentive for water users to implement cost-effective conservation measures
- Helps ensure realistic evaluation of the cost-effectiveness of any new supply development, helping to avoid premature investment or over investment in supply facilities such as surface storage

Issues & Concerns

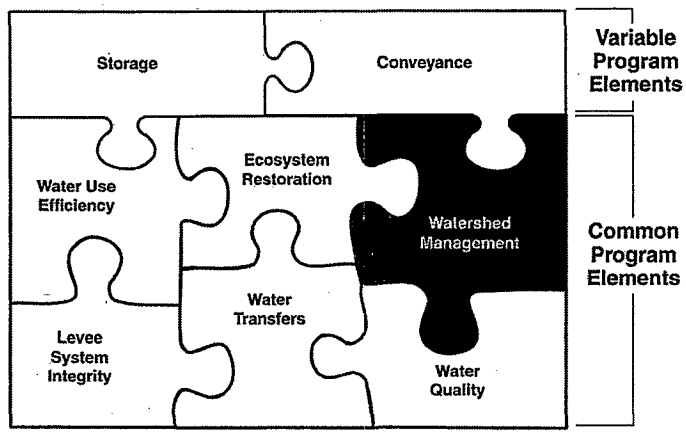
- An open and active water transfer market will provide a critical economic incentive for water conservation

- Need measures to protect rural economies from unintended transfer impacts, protect groundwater resources, and encourage in-stream flow transfers
- Independent transfers clearinghouse may be needed to ensure public review of transfers
- Need to encourage transfers that are environmentally beneficial or benign
- Need a process to examine and resolve technical issues limiting a water transfers market

Watershed Management Coordination

Encourages locally led watershed management activities that benefit all Delta system resources.

The CALFED comprehensive plan is based upon an integrated approach including watershed management. A watershed approach links the CALFED Bay-Delta Program goals and objectives on a regional basis and it encourages local watershed planning and management efforts. The watershed management element of CALFED has evolved into two focus areas: The upper tributary watersheds above reservoirs and major fish passage obstructions; and the lower watershed, generally below those obstructions.



Following are examples of watershed management projects that can make improvements in each CALFED resource area:

Ecosystem Quality – Watershed projects that improve riparian habitat along streams, increase or improve fisheries habitat and passage, restore wetlands, restore the natural stream morphology affecting downstream flows or species may benefit ecosystem quality.

Water Quality – Watershed management activities may benefit water quality in the Delta by helping to identify and control non-point sources of pollution and identify and implement methods to control or treat contaminants. Watershed projects that reduce pollutant loads in streams, lakes or reservoirs could measurably improve downstream water quality.

Water Supply Reliability – Meadows and riparian corridors in the upper watershed tend to slow the rate of runoff and allow more percolation of water into aquifers. When meadows

and riparian corridors are degraded, runoff during storms can occur at higher rates. This makes flood management more difficult and reduces the opportunities to capture runoff in downstream reservoirs.

Levee and Channel Integrity – Attenuation of flood flows coming from the upper watershed can provide benefits far downstream in the system. Delta levees are most vulnerable during high winter flows, so watershed management that reduces these flows can help maintain the integrity of Delta levees.

Key Benefits

- Benefits ecosystem by increasing or improving fisheries habitat and passage, restoring wetlands, and restoring the natural stream morphology affecting downstream flows or species
- Watershed projects that reduce pollutant loads in streams, lakes or reservoirs could measurably improve downstream water quality
- Helps control excess flood runoff which threatens levees and decreases water supply opportunities

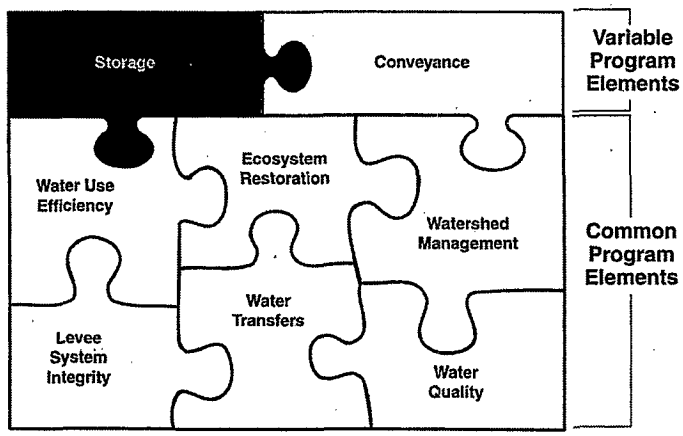
Issues & Concerns

- Watershed management strategy is not adequately developed and does not define clear goals and objectives
- Must emphasize partnerships among the public, local watershed organizations, and governments at all levels
- Program focuses too much on the lower watershed; efforts below and above the major dams must be integrated
- Watershed management strategy should be integrated with water quality and ecosystem restoration

Variable Program Elements

In addition to the Common Program elements, some of the alternatives include provisions for new or expanded water storage. Each alternative includes modification of Delta conveyance.

Storage



Storage may or may not be included in the CALFED alternatives. Storage of water in surface reservoirs or groundwater basins can provide opportunities to improve the timing and availability of water for all uses. The benefits and impacts of surface and groundwater storage may vary depending on the location, size, operational policies and linkage to other Program elements. CALFED has evaluated the following types of new storage:

Upstream Surface Storage – New storage upstream of the Delta could store a portion of runoff that occurs in large volumes over short periods of time in the winter and spring. Examples of potential upstream surface storage include:

- Enlargement of Shasta Reservoir
- Sites-Colusa Reservoir
- Enlargement of Millerton Reservoir
- Montogermy Reservoir

In-Delta Surface Storage – In-Delta surface storage could be developed by converting one or more Delta islands into reservoirs, such as:

- Bacon, Woodward and Victoria islands

An alternative to inundation of prime agricultural acreage would be to develop storage facilities near the Delta, such as Los Vaqueros.

South of Delta Off-Aqueduct Storage – A version of off-stream storage, south of Delta off-stream storage, could be filled by diversions through the Delta Mendota canal or the California Aqueduct. Examples include:

- Enlarged Los Vaqueros Reservoir
- Los Banos Grandes Reservoir
- Garzas Reservoir

Groundwater Storage – Groundwater storage can take the form of direct groundwater banking operations or groundwater conjunctive use operations. Examples include:

- American Basin Conjunctive Use Project
- Kern Water Bank
- Madera Ranch Project

Issues & Concerns

- Surface storage is a physical assurance to avoid groundwater impacts of conjunctive management programs
- Storage should be financed on a "beneficiaries pay" basis to not undermine a transfer market and limit implementation of water use efficiency measures
- Surface storage should be part of a staged alternative or in the context of linked implementation
- Need to compare marginal costs and determine appropriate balance among new storage, water use efficiency and water transfers
- Assurances are needed for water suppliers due to the long lead time to develop new storage
- Environmental or operational concerns have been raised about specific potential storage sites
- The "time value of water" concept must be analyzed carefully under different scenarios to confirm feasibility

Conveyance

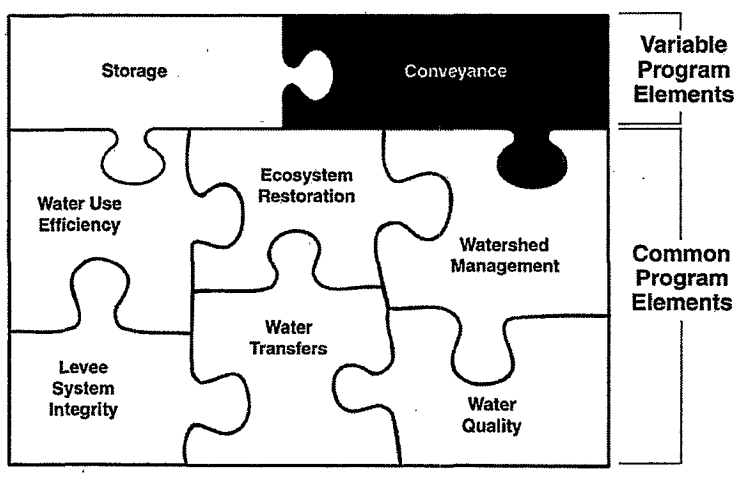
The Delta conveyance element of the Program describes various ways water can be moved through the system to the major export facilities in the southern Delta. While there are countless combinations of potential modifications to Delta channels, three primary categories of Delta configuration options are being studied in Phase II of the Program. These Delta conveyance options were the primary distinguishing features among the three broad categories of alternatives studied in Phase II. They are:

These Delta conveyance options were the primary distinguishing features among the three broad categories of alternatives studied in Phase II.

Alternative 1: Existing System Conveyance. The Delta channels would be maintained essentially in their current configuration. One significant variation would include some selected channel improvements in the southern Delta together with flow and stage barriers at selected locations to allow for increasing the permitted pumping rate at the SWP export facility to full existing physical capacity of 10,300 cfs (similar to DWR's Interim South Delta Program). Other variations include constructing an intertie between the CVP export facility and Clifton Court Forebay, and improvements to SWP and CVP fish screening facilities.

Alternative 2: Modified Through Delta Conveyance. Significant improvements to northern Delta channels would accompany the southern Delta improvements contemplated under the existing system conveyance alternative. Variations include a wide variety of channel configurations, designed to improve flow patterns to benefit fisheries throughout the Delta, provide flood control, and improve water quality in many parts of the Delta.

Alternative 3: Dual Delta Conveyance. The dual Delta conveyance alternative is formed around a combination of modified Delta channels and a new canal or pipeline connecting the Sacramento River in the northern Delta to the SWP and CVP export facilities in the southern Delta. Capacities for this new isolated conveyance facility in the range of 5,000 cfs to 15,000 cfs were evaluated in Phase II of the Program. The new facility would siphon under all major waterways to minimize aquatic impacts.

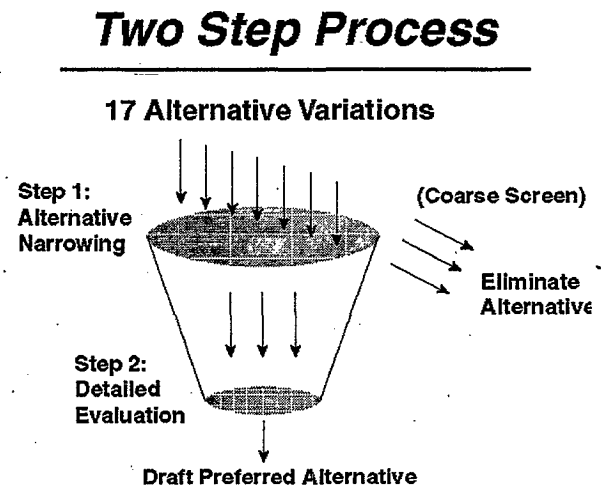


Issues & Concerns

- Isolated facility may not be possible due to the political stigma resulting from the peripheral canal debate in the early 1980's
- Major conveyance modifications requires significant assurances
- Potential deterioration of in-Delta water quality if an isolated facility is built

Finding the Best Alternatives

CALFED developed a two-step process for choosing the best alternative in each category. At the beginning of Phase II, 17 alternative variations were developed around the three broad alternatives resulting from Phase I work. These were then reduced to 12 by eliminating variations with functional equivalents and alternatives deemed not feasible.



These 12 alternative variations represented a reasonable range of different configurations of Delta conveyance and storage assembled with the Common Program elements for levee system integrity, water quality, ecosystem quality, water use efficiency, water transfers and watershed management coordination.

As a tool in moving toward a preferred program alternative, CALFED agencies then conducted preliminary evaluations to develop the "best" alternative for each of the three main categories:

- Alternative 1 (Existing System Conveyance)
- Alternative 2 (Modified Through Delta Conveyance)
- Alternative 3 (Dual Delta Conveyance)

Each of the "best" alternatives includes the six Common Program elements, plus storage and conveyance. The three "best" alternatives fall within the range of the 12 alternative variations evaluated in the draft Programmatic EIS/EIR.

Alternatives at a Glance

Following are brief descriptions of the three best alternatives, which will help CALFED move toward a preferred alternative. Each one contains the six Common Program elements. They differ primarily in how they would move and store water in the system.

Existing System Conveyance Alternative (Alt. 1)

Ecosystem Restoration - The Ecosystem Restoration Program Plan, as discussed earlier, would be implemented with the following refinements:

- Changes in environmental water flows would be met through purchase of existing water from willing sellers and use of the new storage allocated to environmental water supplies.
- Aquatic habitat restoration identified for the south Delta area would be relocated to the northern and western Delta. This change would provide intensive habitat restoration to be located prudently distant from the south Delta pumping facilities.
- Incorporate a portion of identified south Delta wildlife habitat with the setback levees along Old River.

Water Quality - The Water Quality Program, discussed earlier, would be implemented with the following refinements:

- Increased emphasis on control of Delta Island drainage will be necessary to achieve improvements in organic carbon concentrations in exports water treated for drinking. Potential approaches include treatment and rerouting drainage.

Levee System Integrity - The Long-Term Levee Protection Plan would be implemented as described earlier.

Water Use Efficiency - The Water Use Efficiency Program would be implemented as described earlier.

Water Transfers Policy Framework - The Water Transfer Policy Framework would be implemented as described earlier.

Watershed Management Coordination - The Watershed Management Coordination would be implemented as described earlier.

Storage Facilities - The ranges of storage included in Alternative 1 are as follows:

Sacramento Valley

- 0 to 3.0 MAF Surface Storage
- 0 to 250 TAF Groundwater Storage

San Joaquin Valley

- 0 to 500 TAF Surface Storage
- 0 to 500 TAF Groundwater Storage

Off Aqueduct, South of Delta or Near Delta Storage

- 0 to 2.0 MAF Surface Storage
- Conjunctive Use
- Offstream Surface Storage

North of Delta Storage

- Conjunctive Use
- Offstream Storage

Conveyance System

- Minor Modifications to Existing Channels
- New Fish Screens

Modified Though Delta Conveyance Alternative (Alt. 2)

Ecosystem Restoration - The Ecosystem Restoration Program Plan would be implemented with the following refinements:

- Changes in environmental water flows would be met through purchase of existing water from willing sellers and use of the new storage allocated to environmental water supplies.

- The modification of the Mokelumne River Floodway with setback levees, conversion of Bouldin Island to aquatic habitat, and construction of the East Delta Wetlands Habitat will create about 5,000 to 10,000 acres more habitat than identified in the ERPP.

- Incorporate a portion of identified south Delta wildlife habitat with the setback levees along Old River.

Water Quality - The Water Quality Program, discussed earlier, would be implemented with the following refinements:

- Evaluate relocating the water supply intake for North Bay Aqueduct to avoid salts and organic carbon that reduce the ability to recycle water, complicate disinfection, and are sources of disinfection's byproducts. Alternative 2 would not, overall, result in improvement of North Bay Aqueduct export water quality, and a change of intake location would be necessary for North Bay Aqueduct water users to benefit from the Delta solution.

- Relocate Delta island drainage discharges to channels other than those identified for conveyance modifications.

Levee System Integrity - The Long-Term Levee Protection Plan would be implemented as described earlier.

Water Use Efficiency - The Water Use Efficiency Program would be implemented as described earlier.

Water Transfers - The Water Transfer Policy Framework would be implemented as described earlier.

Watershed Management Coordination - The Watershed Management Coordination would be implemented as described earlier.

Storage Facilities - Construction of storage facilities would be authorized on the Sacramento and San Joaquin River systems, in or near the Delta and off-aqueduct storage south of the Delta would be provided through this alternative. Storage would include both surface water impoundments and groundwater conjunctive use. The ranges of storage included in Alternative 2 are as follows:

Sacramento Valley

- 0 to 3.0 MAF Surface Storage
- 0 to 250 TAF Groundwater Storage

San Joaquin Valley

- 0 to 500 TAF Surface Storage
- 0 to 500 TAF Groundwater Storage

Off Aqueduct, South of Delta or Near Delta Storage

- 0 to 2.0 MAF Surface Storage
- Conjunctive Use
- Offstream Surface Storage

North of Delta Storage

- Conjunctive Use
- Offstream Storage

Conveyance System

- Improve Efficiency of Existing Channels

Dual Delta Conveyance Alternative (Alt. 3)

Ecosystem Restoration - The Ecosystem Restoration Program Plan would be implemented with the following refinements:

- Changes in environmental water flows would be met through purchase of existing water from willing sellers and use of the new storage allocated to environmental water supplies.

- Habitat improvements along the North Fork Mokelumne River would be limited to establishing a riparian tree corridor associated with levees possibly set back for modified channel conveyance.

- Shallow water habitat identified for the Delta would be located in the eastern Delta by breaching select portions of the east levee along the South Fork Mokelumne river and protecting interior levee slopes.

Water Quality - The Water Quality Program, discussed earlier, would be implemented with the following refinements:

- Evaluate relocating water supply intakes (such as North Bay Aqueduct, Tracy, and Contra Costa Water District intakes) to avoid salts and organic carbon that reduce the ability to recycle water and that complicate disinfection and are sources of disinfection byproducts.

- Actions to reduce contributions of organic carbon from Delta islands through treatment or drainage rerouting may be unnecessary.

Levee System Integrity - The Long-Term Levee Protection Plan would be implemented as described earlier.

Water Use Efficiency - The Water Use Efficiency Program would be implemented as described earlier.

Water Transfers - The Water Transfer Policy Framework would be implemented as described earlier.

Watershed Management Coordination - The Watershed Management Coordination would be implemented as described earlier.

Storage Facilities - The ranges of storage included in Alternative 3 are as follows:

Sacramento Valley

- 0 to 3.0 MAF Surface Storage
- 0 to 250 TAF Groundwater Storage

San Joaquin Valley

- 0 to 500 TAF Surface Storage
- 0 to 500 TAF Groundwater Storage

Off Aqueduct, South of Delta or Near Delta Storage

- 0 to 2.0 MAF Surface Storage
- Conjunctive Use
- Offstream Surface Storage

North of Delta Storage

- Conjunctive Use
- Offstream Storage

Conveyance System

- Improve Efficiency of Existing Channels
- Construct an Isolated Facility

Decision Process

Since all three alternatives include Common Program elements that make significant progress toward meeting the Program's objectives and solution principles, additional criteria were needed to determine the relative performance, impacts and overall merit of each alternative. These criteria are called distinguishing characteristics and represent ways in which the three alternatives differ.

Distinguishing Characteristics

1. In-Delta water quality
2. Export water quality
3. Diversion effects on fisheries
4. Delta flow circulation
5. Storage and release of water
6. Water supply opportunities
7. Water transfer opportunities
8. Operations flexibility
9. South Delta access to water
10. Risk to export water supplies
11. Total cost
12. Assurances difficulty
13. Habitat impacts
14. Land use changes
15. Socio-economic impacts
16. Consistency with solution principles
17. Ability to phase facilities
18. Brackish water habitat

Once the three "best" alternatives were identified, some distinguishing characteristics no longer varied greatly among the alternatives. These included storage and release of water, water transfer opportunities, south Delta access to water, total cost, habitat impacts, land use changes, socio-economic impacts, ability to phase facilities and brackish water habitat.

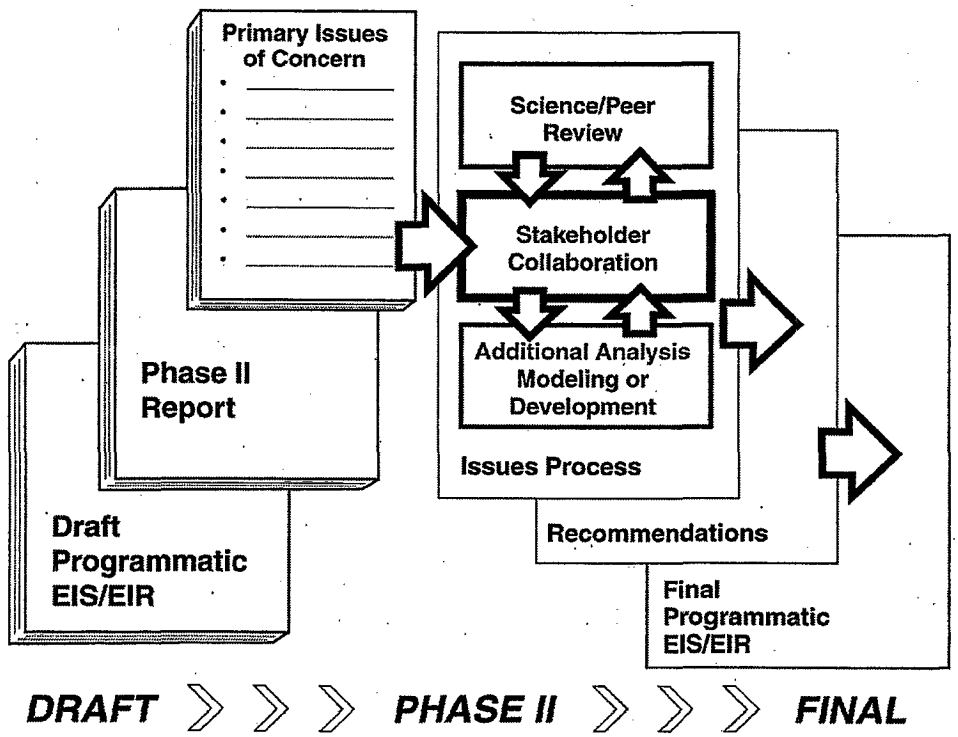
The most significant distinguishing characteristics that varied the most among alternatives included in-Delta water quality, export water quality, diversion effects on fisheries, Delta flow circulation, water supply opportunities, operational flexibility, risk to export water supplies, assurances and consistency with solution principles. These variations among alternatives are described in the Phase II Interim Report.

Phase II Interim Report

The Phase II Interim Report discusses several key issues that need to be resolved prior to the selection of a preferred alternative. These issues were identified through a variety of means, including technical analysis and stakeholder input.

Public participation is a key component of the CALFED Bay-Delta Program. The federally chartered Bay-Delta Advisory Council meets regularly to review the Program's progress and offer its perspectives. In fall 1997, eight public meetings were held throughout the state. These followed a set of scoping meetings held at the outset of the Program a year and a half earlier to identify and define the problems and potential actions to be considered. Several issues-oriented workgroups have also met regularly throughout the process to focus on individual Program components, such as ecosystem restoration and water transfers.

All of this input has allowed technical staff to receive feedback and advice during the decision making process. Much of this feedback has already been incorporated into the CALFED alternatives. However, there are some issues that require additional work. Some of these issues may require independent scientific review, focused stakeholder collaboration or simply additional analysis and development between the release of the draft PEIS/PEIR and the final document.



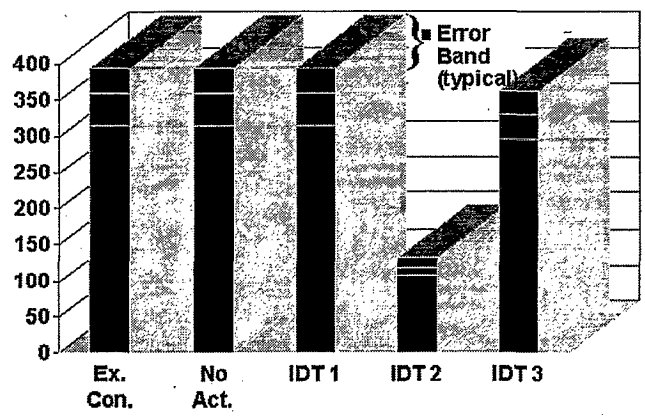
Getting to a Solution

The key issues that need additional analysis before selecting a preferred alternative can be separated into three categories:

Major Technical Issues

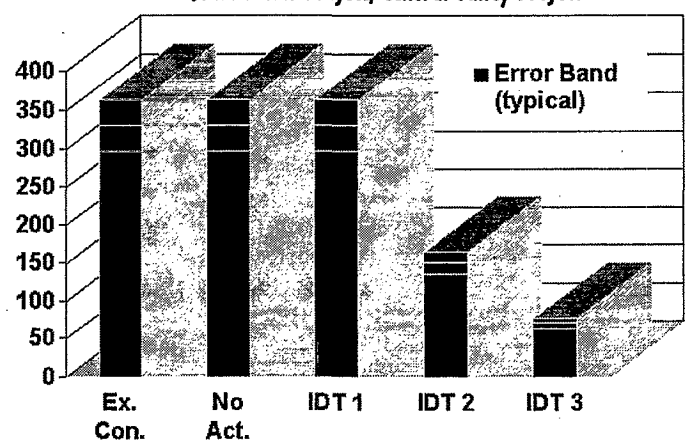
- **Implications on Water Quality** – 22 million Californians get all or part of their drinking water from the Bay-Delta system. Raw water from the system must be treated to remove impurities. A side effect of water treatment is the formation of unwanted chemical byproducts, some of which are harmful. The reduction of bromide and total organic carbon, two substances in Delta water that contribute to the formation of these elements during treatment, vary according to each alternative.

Bromide ug/l -- Contra Costa



Bromide ug/l

State Water Project/Central Valley Project



CALFED BAY-DELTA PROGRAM

- **Implications on Diversion Effects on Fisheries** – The focus for diversion effects on fisheries is on estuarine and migratory fish. The central issue is whether, even with screen relocation and improvement, continued diversions from the South Delta will be a sufficiently large cause of fish deaths to outweigh the benefits of other elements of the CALFED Program.

Implementation Strategy and Planning Issues

- **Developing a Consensus Assurances Package** – An assurances package could be constructed that would assure implementation of any of the alternatives. However, stakeholder consensus on an assurances package is a significant challenge. The challenge of implementing the CALFED Program in phases is to allow actions that are ready to be taken immediately to go forward, while assuring that each interest group has a stake in the successful implementation of the entire Program over the implementation period.

- **Financial Package** – There are several financial principles that will be applied to the preferred alternative. They include a benefit-based approach, public/user split, ability to pay, crediting and cost allocation methodology. Detailed application of these principles to the preferred alternative will require policy level involvement from the state and federal CALFED agencies and stakeholder interests.

Issues Relating to Ongoing Program Refinement

- **Program Element Refinement** -- There are a variety of technical and consensus related issues relating to the program elements and their integration with one another. These issues will be resolved prior to the selection of the preferred alternative through a variety of efforts. Some additional technical analysis will occur, but most efforts will focus on agency and stakeholder involvement through forums such as public hearings, workshops, existing advisory bodies and new focused panels.

Restoration Coordination Update

While the details of the preferred alternative have not yet been finalized, certain ecosystem restoration projects have already begun. These include restoration activities that will be beneficial to the long-term Program regardless of which alternative is ultimately selected.

The CALFED ecosystem restoration process has been charged with recommending activities to be funded from the $157 million in state, federal and stakeholder contributions available this year. This includes the $85 million appropriated by Congress in FY 98 under the Bay Delta Act. The Environmental Protection Agency has included $2 million in its appropriation for these activities. California's Proposition 204 included $60 million for these activities, and the California Urban Water Agencies contributed $10 million. To date, CALFED has identified 71 projects totaling more than $84 million. CALFED has also developed the spending plan that will be used for the remaining funds. This spending plan includes a federal component, which Secretary Babbitt is expected to approve in the near future, that allocate the $85 million in FY 98 appropriation.

In April 1998, CALFED will begin a public solicitation process to select additional projects identified in the spending plan.

How Are Projects Selected?

Projects are selected through a collaborative process involving stakeholders and CALFED agencies. Stakeholder input has come from the federally chartered Bay-Delta Advisory Council and the Ecosystem Roundtable, a subcommittee of BDAC specifically created to provide recommendations from a broad cross section of stakeholder interests. The decision-making process includes the following steps:

- Identify Ecosystem Restoration Priorities
- Identify Types of Actions to Address These Priorities
- Solicit Proposals to Address the Priorities
- Recommend Which Proposals to Fund Using Technical Panel

Final accountability and decision-making for the federal funds rests with the Secretary of the Interior and final accountability and decision-making for the state funds rests with the Secretary for Resources.

The next solicitation of proposals begins in March 1998. Proposals will be solicited to address gaps or actions not adequately covered during the first round of funding, as well as continuing funding for critical actions.

Defining Success

With the significant investments being made in ecosystem restoration, it is important that the elements of success be clearly defined at the outset. Success can be measured at three levels. Success at the first two levels will be tracked by systems being put in place this year. Overall a program that is under development and scheduled to be completed as part of the CALFED long-term program will monitor success.

The most basic level of success is determined through tracking of individual project implementation. The tracking system to monitor, schedule, budget and confirm completion of the tasks is described above and will be used to determine if projects are being implemented.

The next level of success will be tracked through monitoring at the individual project level. The project sponsor in coordination with CALFED staff will conduct this monitoring. Information from each individual project will be forwarded to CALFED staff and incorporated into a master database.

The third level of success is defined by a system-wide biological response to the project rather than at the local level. This system-wide evaluation is much larger in scope than the previous levels. It is being developed in the Comprehensive, Coordinated Monitoring and Research Program (CCMARP) by a multi-agency effort, which includes technical experts from academia, the stakeholder community and other outside entities. This effort is underway and will be completed as part of the overall CALFED long-term program. CCMARP will include:

- Conceptual models
- Ecological indicators and performance measures
- An overall monitoring program to track the indicators and performance measures
- A system to evaluate and report the results of the monitoring program
- A focused research program

Monitoring Progress

A master tracking system is being developed for all approved projects. For the 71 projects already identified for funding, the Contract Agency -- the CALFED agency or others receiving funds -- is responsible for day-to-day contract management. The appropriation fund manager will track all fiscal and programmatic aspects of each contract. In the case of Proposition 204 funds, the state has assigned CALFED staff as the appropriation manager. In the case of federal funds through the Bay-Delta Ecosystem Restoration Appropriation, the Department of the Interior as the appropriation fund manager has designated the Bureau of

Reclamation. This arrangement has the approval of Congress through the FY 1998 Energy and Water Development Appropriation. The Appropriation fund manager will request program status and project status for information from each Contract Agency for preparation of a status report by various sources, which include state and federal governments and local government and stakeholder groups.

Reclamation, as the appropriation fund manager for the Bay-Delta Ecosystem Restoration Appropriation, will prepare the quarterly report requested by Congress in the House and Senate Report to the FY 1998 Energy and Water Development Appropriation. The report will include a description of each project approved for funding, the total estimated cost of each project, the agency performing the task and a status of the project funded.

CALFED staff, working with Reclamation, the National Fish and Wildlife Foundation, the U.S. Environmental Protection Agency, the California Urban Water Agency and others providing resources toward Bay-Delta Ecosystem Restoration, will prepare a comprehensive overall program report that will be available to all interested parties.

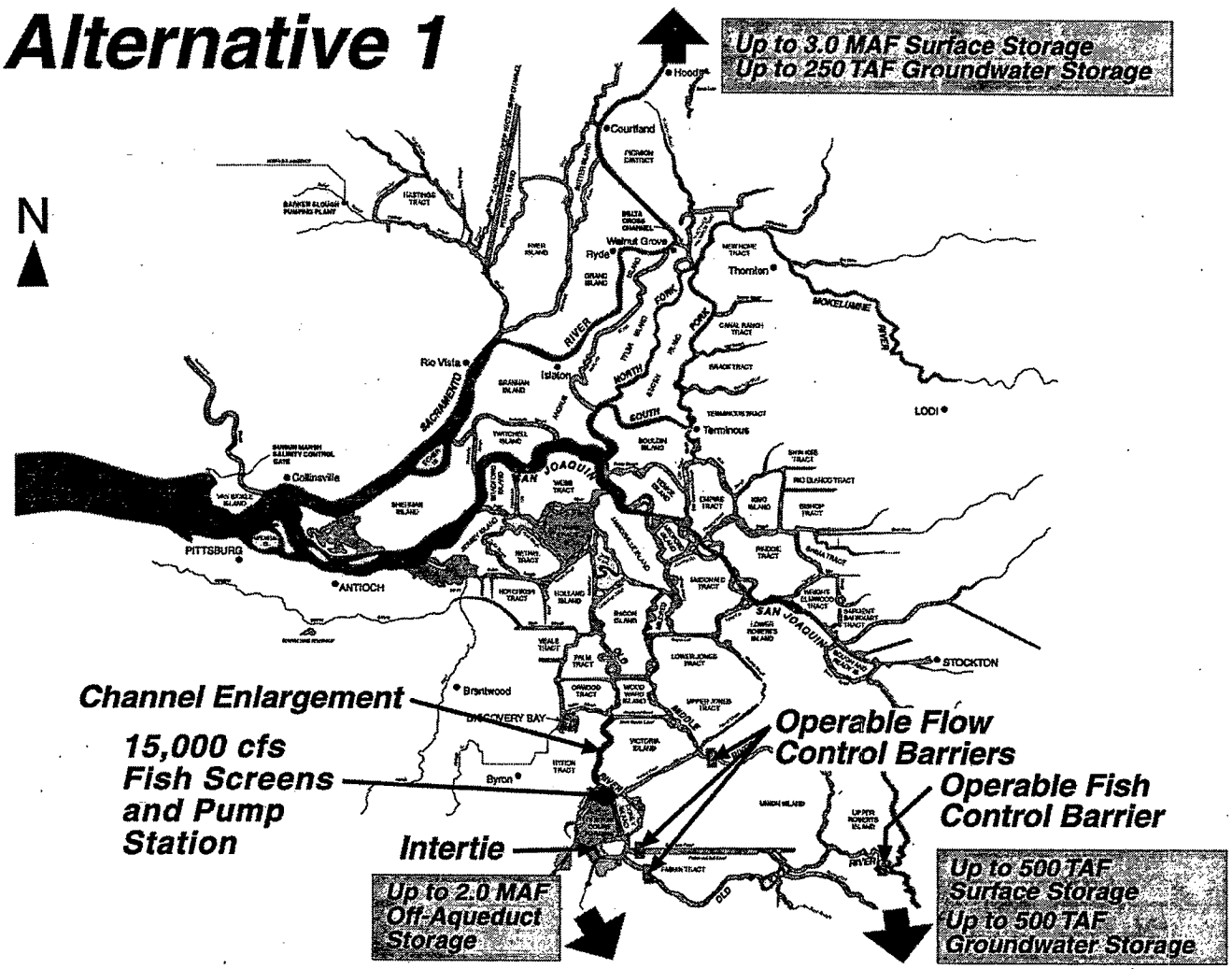
Cost Sharing

The state and federal CALFED agencies have developed and executed a cost-share agreement that explains the accounting process for state and federal expenditures. The cost-share agreement calls for equal expenditures over the life of the agreement, but also allows for either the state or the federal government to make funds available early in the Program in the absence of an immediate match from the other side.

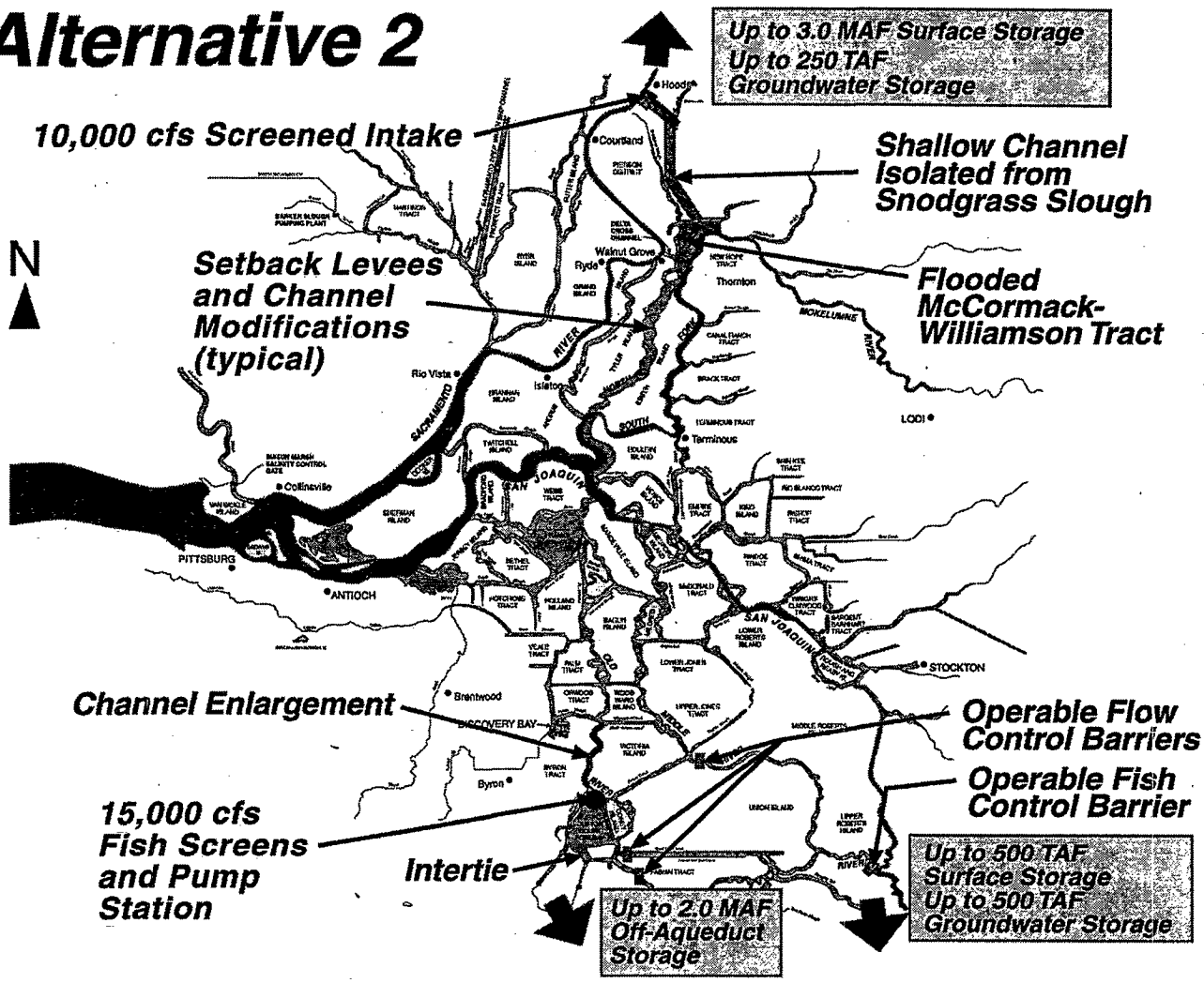
In the first funding cycle, CALFED recommended an allocation of more state funds than federal funds. In the current funding cycle, that is being reversed with more federal funds than state funds being allocated. This flexibility in maintaining a long-term or Program-life equal match of state and federal funds allows the CALFED Program to take advantage of early implementation opportunities and will lead to an overall lower cost for the Program.

Federal CALFED agencies also executed a separate federal fund sharing agreement, which established the process for federal agencies to secure funds from the primary federal Bay Delta Act appropriation account held in the Bureau of Reclamation. Under this federal fund sharing agreement, federal agencies identified through the CALFED process as the lead agency for a project or grant can secure the funds from the single Reclamation account.

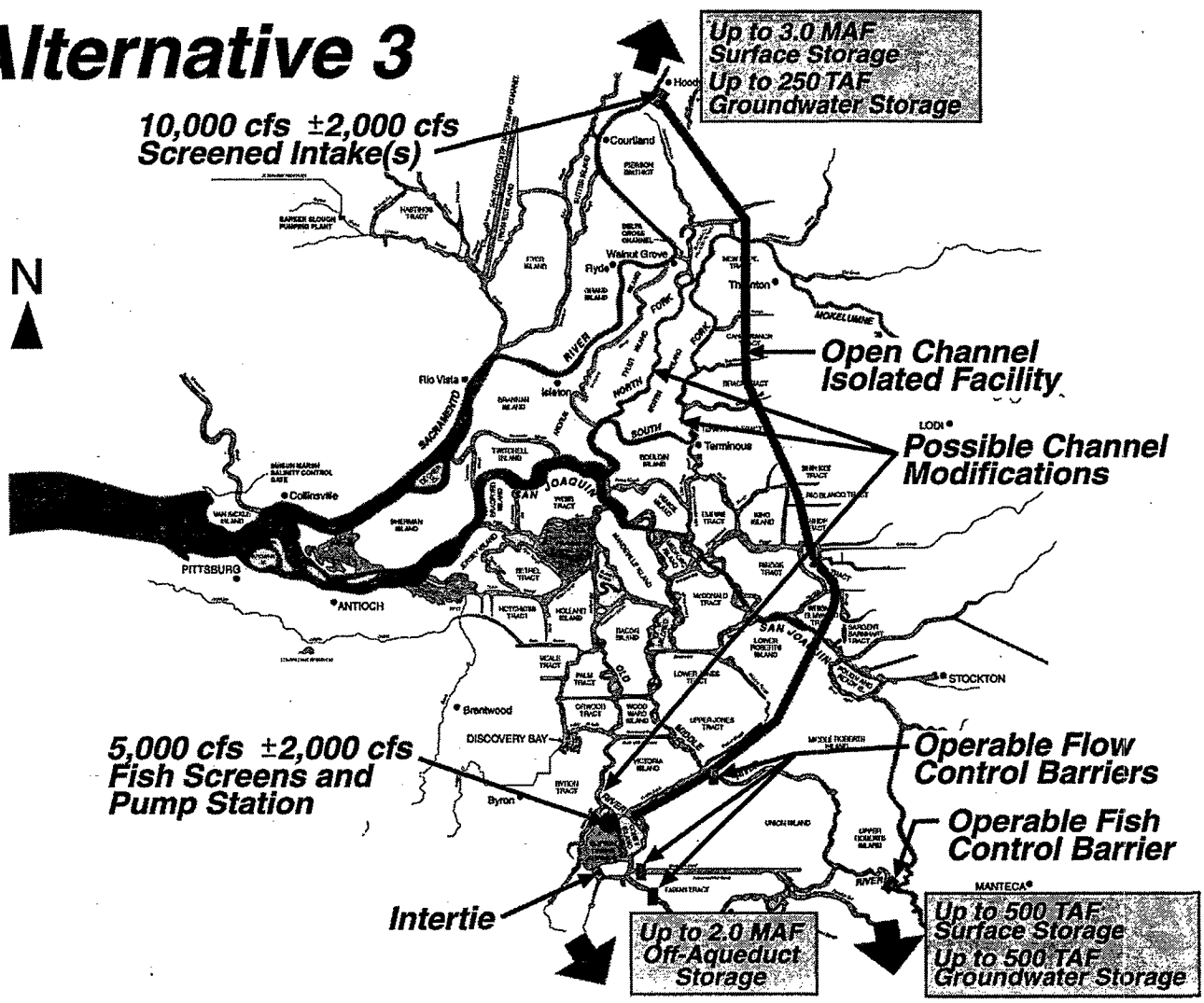
Alternative 1



Alternative 2



Alternative 3



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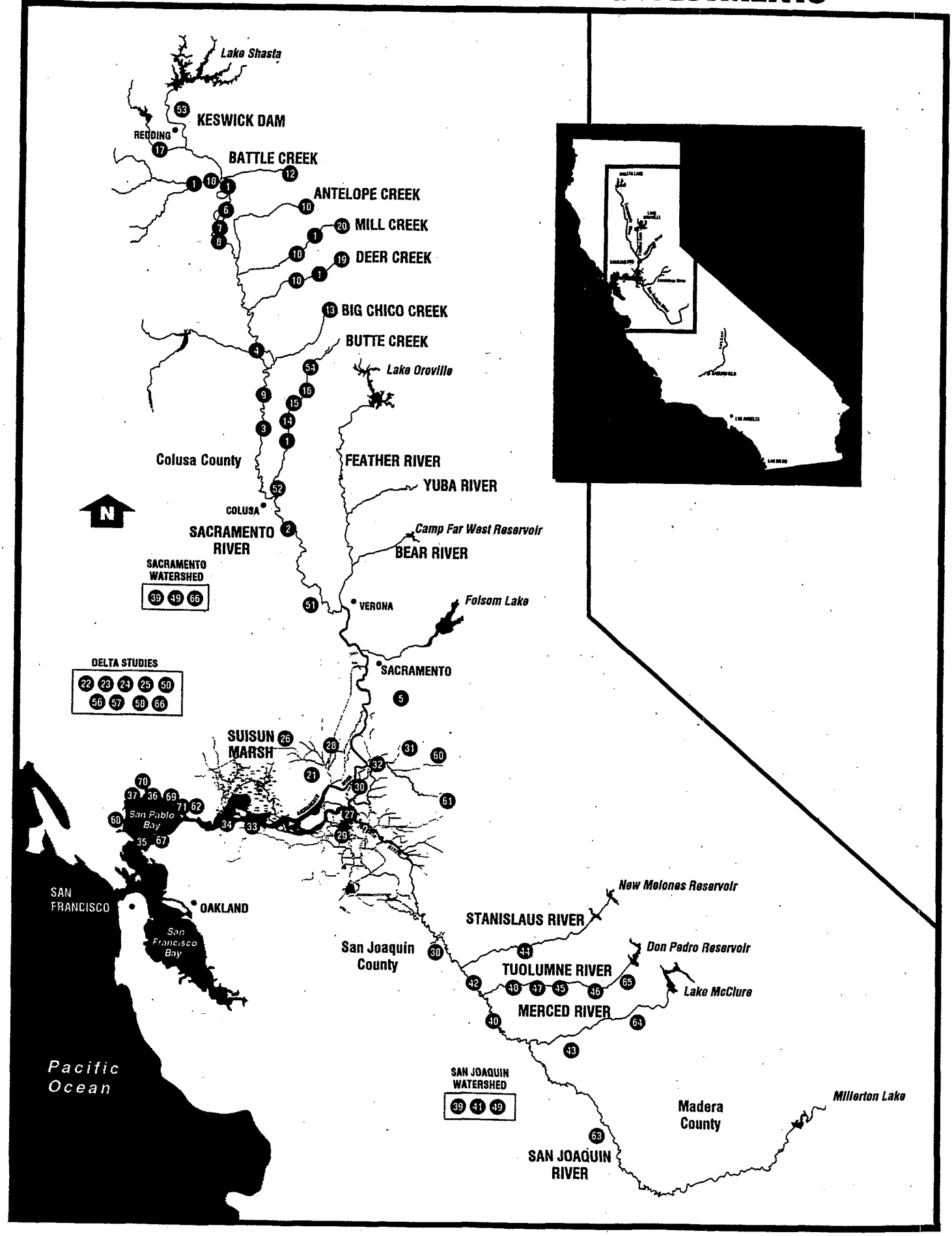
CALFED FY 1998 ECOSYSTEM INVESTMENTS



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Fiscal Year 1998 CALFED Ecosystem Investments

1. Sacramento River & Tributary Fish Screens
2. RD 108 Fish Screen
3. Princeton Fish Screen
4. Wilson Ranch Screen
5. Assessment and Implementation of Urban Use Reduction of Diazinon and Chlorpyrifos (Sacramento County)
6. Watershed Management Planning – Upper Sacramento River
7. Sacramento River Floodplain Acquisition – National Process Restoration
8. Sacramento River Floodplain Acquisition – Active Riparian Forest Restoration
9. Sacramento River Meander Restoration Project
10. Watershed Improvements/Sediment Stabilization (Deer, Mill, Antelope Cr)
11. Watershed Restoration Planning (Auburn Ravine, Coon Creek)
12. Battle Creek Screens and Fish Passage
13. Watershed Plan (Big Chico Creek)
14. Gorrill Dam Screen and Ladder
15. Adams Dam Screen and Passage
16. Butte Creek Acquisition and Riparian Restoration
17. Saeltzer Dam Fish Passage
18. Cottonwood Creek Channel Restoration
19. Watershed Plan Implementation (Deer Creek)
20. Mill Creek Riparian Restoration – Phase II
21. Hastings Tract Fish Screen – Feasibility Study
22. Monitoring of Delta Contaminants
23. Effects of Wetlands Restoration on Methyl Mercury Levels
24. Sedimentation Movement and Availability and Monitoring in Delta
25. Contaminant Effects on Smelt
26. Jepson Prairie Restoration
27. In Channel Island Demonstration Project
28. Liberty Island Acquisition
29. Franks Tract Wetlands Habitat Restoration
30. Tyler Island Levee Protection and Habitat Restoration Pilot Project
31. Cosumnes Floodplain Acquisition and Restoration
32. Mokelumne River Setback Levee and Habitat Restoration
33. Bay Point Shoreline Restoration Plan

34. Martinez Regional Shoreline Restoration
35. Preventing Exotic Introductions from Ballast Water
36. Cullinan Ranch Restoration
37. Tolay Creek Restoration
38. Banta-Carbona Fish Screen
39. Biologically Integrated Orchard System (BIOS) – Pesticide and Fertilizer Reduction/Sacramento and San Joaquin Watersheds
40. San Joaquin River Real-Time Water Quality Management Program
41. Developing a Genetic Baseline for San Joaquin Salmon
42. Acquisition and Restoration of Refuge Lands (SJR NWR)
43. Bear Creek Floodplain Restoration Demonstration Project (SLNWR)
44. Stanislaus River Channel Restoration (Willms Site)
45. Knights Ferry Gravel Replenishments
46. Gravel Replacement (Basso Bridge)
47. Tuolumne River Channel Restoration (Special Run Pool 9)
48. Tuolumne R. Setback Levees & Channel Restoration (Mining Reach)
49. Evaluation of Alternative Pesticide Use Reduction Practices
50. Assessment of Organic Matter in the Habitat and its Relationship to the Food Chain
51. Richter Brothers Screen
52. Boeger Family Farm Screen
53. ACID Fish Passage
54. Butte Creek Watershed
55. Sand and Salt Creek Watershed Project
56. Twitchell Island Restoration
57. Evaluation of Selenium Sources, Levels, and Consequences in Delta
58. Culture of Delta Smelt
59. Cache Slough Habitat Enhancement
60. Inventory of Forest Road Systems, Cat Creek Watershed
61. Woodbridge Fish Screen and Passage
62. Selected Fish Screens - Suisun Marsh
63. Bacterial Treatment of Selenium in the Panoche Drainage
64. Merced River Ranch Acquisition and Restoration
65. Basso Bridge Land Acquisition
66. Evaluation of Tagging Data
67. San Francisco Bay Area Wetlands Ecosystem Goals Project
68. Hamilton Wetlands Restoration Project
69. Napa River Watershed Stewardship
70. Sonoma Creek Watershed Restoration Project
71. South Napa River Wetlands Acquisition and Restoration Program

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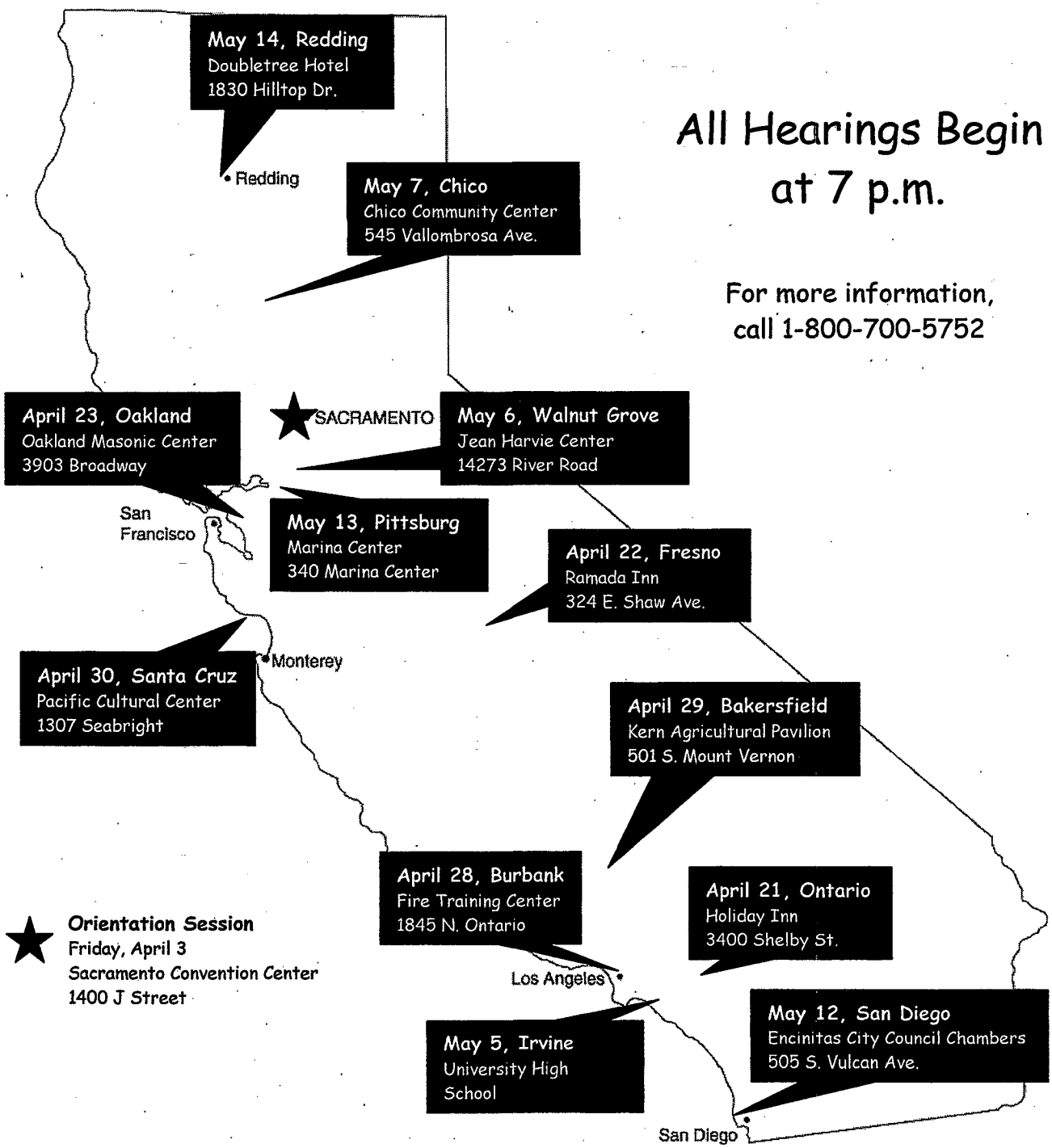
Public Hearings Schedule

CALFED will hold 12 public hearings to gain input on the draft Programmatic Environmental Impact Statement/Environmental Impact Report. An orientation session will be held in Sacramento April 3.



For more information ■ (916) 657-2666 ■ (916) 654-9780 FAX ■ 1-800-700-5752 Information Line ■ http://calfed.ca.gov

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